

CRITICAL CURRENTS AND HIGH TEMPERATURE SUPERCONDUCTORS

P. Chaudhari  
IBM Research Division  
Thomas J. Watson Research Center  
Yorktown Heights, N.Y.

ABSTRACT

In this talk I shall summarize the experimental information on critical currents and epitaxial thin films of high temperature superconductors. We also describe experiments carried out to measure critical currents across single grain boundaries. A variety of mechanisms responsible for limiting currents in films as well as across grain boundaries are presented and their predictions compared with experimental data.